



SEQUENCE LISTING

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<110> Allen, Steve
Lee, Jian Ming

<120> Plant Protein Kinases

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<141> 2001-05-14

<150> US 60/092,438
<151> 1998-07-10

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<151> 1999-07-02

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RECEIVED
NOV 22 2002
TECH CENTER 1600/2900

B13

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Arg Leu Gly Gln Gly Gln Phe Gly Thr Thr Tyr Leu Cys Val Glu Arg
      35             40             45

Ala Thr Gly Lys Glu Phe Ala Cys Lys Ser Ile Leu Lys Xaa Leu Val
  50             55             60

Thr Asp Asp Asp Val Glu Asp Val Arg Arg Glu Ile Gln Ile Met His
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Asp Ala Val Ala Val
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<213> Oryza sativa

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 35 40 45

 Val Gly Thr Pro Arg Arg Arg Gly Ser Lys Ser Gly Ser Thr Thr Pro
 50 55 60

 Gly His Gln Thr Pro Gly Val Ala Trp Pro Ser Pro Tyr Pro Ser Gly
 65 70 75 80

 Gly Ala Ser Pro Leu Pro Ala Gly Val Ser Pro Ser Pro Ala Arg Ser
 85 90 95

 Thr Pro Arg Arg Phe Phe Lys Arg Pro Phe Pro Pro Pro Ser Pro Ala
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 Lys His Ile Lys Ala Thr Leu Ala Lys Arg Leu Gly Gly Gly Lys Pro
 115 120 125

 Lys Glu Gly Thr Ile Pro Glu Glu Gly Gly Val Gly Ala Gly Gly Gly

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B

B¹³

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Lys Leu Gln Phe Lys Leu Leu Glu Pro Arg Asp Gly Phe Val Ser Leu
 485 490 495

Asp Asn Phe Arg Thr Ala Leu Thr Arg Tyr Leu Thr Asp Ala Met Lys
 500 505 510

Glu Ser Arg Val Leu Glu Phe Leu His Ala Leu Glu Pro Leu Ala Tyr
 515 520 525

Arg Arg Met Asp Phe Glu Glu Phe Cys Ala Ala Ala Ile Ser Pro Tyr
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Gln Leu Glu Ala Leu Glu Arg Trp Glu Glu Ile Ala Gly Thr Ala Phe
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Gln Gln Phe Glu Gln Glu Gly Asn Arg Val Ile Ser Val Glu Glu Leu
 565 570 575

Ala Gln Glu Leu Asn Leu Ala Pro Thr His Tyr Ser Ile Val Gln Asp
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Pro Pro Ser Pro Ala Lys His Ile Arg Ala Leu Leu Ala Arg Xaa His
35 40 45
Gly Ser Val Lys Pro Asn Glu Ala Ser Ile Pro Glu Ala Ser Xaa Cys
50 55 60
Glu Leu Gly Leu Asp Lys Ser Phe Gly Phe Ala Lys Gln Phe Ser Ala
65 70 75 80
His Tyr Glu Leu Ser Asp Glu Xaa Gly Arg Gly His Phe Gly Tyr Thr
85 90 95
Cys Ser Ala Lys Gly Lys Lys Gly Ala Phe Lys Gly Leu Asn Val Ala
100 105 110
Val Lys Val Ile Pro Lys Ala Lys Met Thr Thr Ala Ile Ala Ile Glu
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B¹³

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          20             25             30
His Leu Gln Gly Val Val His Arg Asp Leu Lys Pro Glu Asn Phe Leu
          35             40             45
Phe Ser Ser Lys Glu Glu Asn Ser Pro Leu Lys Val Ile Asp Phe Gly
          50             55             60
Leu Ser Asp Phe Val Lys Pro Asp Glu Arg Leu Asn Asp Ile Val Gly
          65             70             75             80
Ser Ala Tyr Tyr Val Ala Xaa Glu Val Leu His Arg Ser Tyr Gly Thr
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Glu Gly Asp Met Xaa Ser Ile Gly Val Ile Ala Tyr Ile Leu Leu
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B13

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 50 55 60
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 65 70 75 80
 Gly His Gly Ser Phe Gly Thr Val Phe Gln Ala Lys Cys Leu Glu Thr
 85 90 95
 Gly Glu Thr Val Ala Ile Lys Lys Val Leu Gln Asp Lys Arg Tyr Lys
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 Asn Arg Glu Leu Gln Thr Met Arg Val Leu Asp His Pro Asn Val Val
 115 120 125
 Ala Leu Lys His Cys Phe Phe Ser Lys Thr Glu Lys Glu Glu Leu Tyr
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 Leu Asn Leu Val Leu Glu Tyr Val Pro Glu Thr Ala His Arg Val Ile
 145 150 155 160
 Lys His Tyr Asn Lys Met Asn Gln Arg Met Pro Leu Ile Tyr Ala Lys
 165 170 175
 Leu Tyr Met Tyr Gln Ile Cys Arg Ala Leu Ala Tyr Ile His Asn Ser

180 185 190
 Ile Gly Val Cys His Arg Asp Ile Lys Pro Gln Asn Leu Leu Val Asn
 195 200 205
 Pro His Thr His Gln Leu Lys Leu Cys Asp Phe Gly Ser Ala Lys Val
 210 215 220
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 225 230 235 240
 Arg Ala Pro Glu Leu Ile Phe Gly Ala Thr Glu Tyr Thr Thr Ala Ile
 245 250 255
 Asp Val Gly Ser Ala Gly Cys Val Leu Ala Glu Leu Leu Leu Gly Gln
 260 265 270
 Pro Leu Phe Pro Gly Glu Ser Gly Val Asp Gln Leu Val Glu Ile Ile
 275 280 285
 Lys Val Leu Gly Thr Pro Thr Arg Glu Glu Ile Lys Cys Met Asn Pro
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 Asn Tyr Thr Glu Phe Lys Phe Pro Gln Ile Lys Ala His Pro Trp His
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 Lys Ile Phe His Lys Arg Met Pro Ala Glu Ala Val Asp Leu Val Ser
 325 330 335
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 Leu Val His Pro Phe Phe Asp Glu Leu Arg Asp Pro Asn Thr Arg Leu
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 Pro Asn Gly Arg Phe Leu Pro Pro Leu Phe Asn Phe Lys Pro His Glu
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<223> n = a, c, g or t

<220>
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<222> (333)
<223> n = a, c, g or t

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<222> (417)
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<222> (506)
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<220>
<221> unsure
<222> (521)

B¹³
<223> n = a, c, g or t

<400> 11

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tgaccgatag	atccattgcg	gagttgagtg	ttgatgcaaa	gctgattcgc	catcgtttag	180
ctttttataa	gagatgggtt	cagtangggg	tgcgccgtct	gggttaaaca	acagcagtan	240
caccagcatg	ggtgctgaga	agttgcctga	tcagatgcat	gatctgaaga	taaggggacga	300
taaggaantt	gaacgactat	tattaacngc	aanggaacag	aaancggcca	cataattgtc	360
acaactactg	gnggcanaaa	tggtcanccg	aaacanacag	ttagctacat	ggctgancgt	420
attgtagggc	aagggttcatt	tgggattgtc	ttccaagcaa	aattctggag	acaagggtgag	480
acagttgcta	tcaagaangt	tctcangata	aacgctacaa	naaccgttag	cctcaaacca	540
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<210> 12

<211> 105

<212> PRT

<213> Oryza sativa

<220>

<221> UNSURE

<222> (5)

<223> Xaa = ANY AMINO ACID

<220>

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<222> (16)

<223> Xaa = ANY AMINO ACID

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<223> Xaa = ANY AMINO ACID

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<221> UNSURE

B¹³
<222> (69)
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<220>
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<220>
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<222> (103)
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<400> 12
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1 5 10 15
Thr Ser Met Gly Ala Glu Lys Leu Pro Asp Gln Met His Asp Leu Lys
20 25 30
Ile Arg Asp Asp Lys Glu Xaa Glu Xaa Xaa Thr Ile Ile Asn Xaa Xaa
35 40 45
Gly Thr Glu Xaa Gly His Ile Ile Val Thr Thr Thr Gly Gly Xaa Asn
50 55 60
Gly Xaa Pro Lys Xaa Thr Val Ser Tyr Met Ala Xaa Arg Ile Val Gly
65 70 75 80
Gln Gly Ser Phe Gly Ile Val Phe Gln Ala Lys Phe Trp Arg Gln Gly
85 90 95
Glu Thr Val Ala Ile Lys Xaa Val Leu
100 105

<210> 13
<211> 1429
<212> DNA
<213> Glycine max

<220>
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<222> (1202)
<223> n = a, c, g or t

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<222> (1237)
<223> n = a, c, g or t

<220>
<221> unsure
<222> (1297)
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<220>
<221> unsure
<222> (1340)
<223> n = a, c, g or t

<220>

B13

<221> unsure
<222> (1376)
<223> n = a, c, g or t

<220>
<221> unsure
<222> (1410)
<223> n = a, c, g or t

<220>
<221> unsure
<222> (1416)
<223> n = a, c, g or t

<400> 13
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cggttggtgt ggcaccaact tcgggtttga gagaagccag tgggcatgga gcagcaggtg 180
ttgatagatt gccagaggag atgaacgata tgaaaattag ggatgataga gaaatggaag 240
ccacagttgt tgatggcaac ggaacggaga caggacatat cattgtgact accattgggg 300
gtagaaatgg tcagcccaag cagactataa gctacatggc agagcgtggt gtagggcatg 360
gatcatttgg agttgtcttc caggctaagt gcttgaaac cggtgaaact gtggctatca 420
aaaaggttct tcaagacaag aggtacaaga accgggagct gcaaacaatg cgccttcttg 480
accacccaaa tgtcgttgct ttgaagcact gtttcttttc aaccactgaa aaggatgaac 540
tataccttaa tttggttctc gaatatgttc ctgaaacagt taatcgggtg ataaaacatt 600
acaacaagtt taaccaaaag atgccactga tatatgtgaa actctatata taccagatct 660
ttagggcggt atcttatatt catcgttgta ttggagtctg ccatcgggat atcaagcctc 720
aaaatctatt ggtcaatcca cacactcacc aggttaaatt atgtgacttt ggaagtgcaa 780
aggttttggt aaaaggcgaa ccaaatatat catacatatg ttctagatac tatagagcac 840
ctgagctcat atttggcgca actgaatata ctacagccat tgacgtctgg tctgttggtg 900
gtgttttagc tgagctgctg cttggacagc ctctgttccc tggtgagagt ggagttgatc 960
aacttggtga gatcatcaag gttctgggca ctccaacaag ggaagagatt aagtgcata 1020
accctaatta tacagaattt aaattcccac agattaaagc acatccatgg cacaagatct 1080
tccataagcg catgcctcca gaggtctgtt atttggtatc aagactacta caatactccc 1140
ctaacttgcg gtgcacagtt ttagatgcct tggacgcacc ctttcctttg gacgaattcc 1200
gngatccaaa tctcgcgttg ccaaattggc cgatccntcc aacaactatt aattcaaacc 1260
catgaactga aagtgtccaa ctgagatttg gggaaantgg tcaaagcatg caaggaacaa 1320
tgccgtttct ggcttgtaan tgtacaaaac tgaagtgttg ttcatataga atgcgngctt 1380
cctcattaaa ggaattgtgg accttatgan tcgttnccgt aacagttag 1429

<210> 14
<211> 399
<212> PRT
<213> Glycine max

<220>
<221> UNSURE
<222> (391)
<223> Xaa = ANY AMINO ACID

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Met Thr Ser Val Gly Val Ala Pro Thr Ser Gly Leu Arg Glu Ala Ser
20 25 30
Gly His Gly Ala Ala Gly Val Asp Arg Leu Pro Glu Glu Met Asn Asp
35 40 45
Met Lys Ile Arg Asp Asp Arg Glu Met Glu Ala Thr Val Val Asp Gly

B

B13

50	55	60
Asn Gly Thr Glu Thr Gly His Ile Ile Val Thr Thr Ile Gly Gly Arg		
65	70	75
Asn Gly Gln Pro Lys Gln Thr Ile Ser Tyr Met Ala Glu Arg Val Val		
	85	90
Gly His Gly Ser Phe Gly Val Val Phe Gln Ala Lys Cys Leu Glu Thr		
	100	105
Gly Glu Thr Val Ala Ile Lys Lys Val Leu Gln Asp Lys Arg Tyr Lys		
	115	120
Asn Arg Glu Leu Gln Thr Met Arg Leu Leu Asp His Pro Asn Val Val		
	130	135
Ala Leu Lys His Cys Phe Phe Ser Thr Thr Glu Lys Asp Glu Leu Tyr		
	145	150
Leu Asn Leu Val Leu Glu Tyr Val Pro Glu Thr Val Asn Arg Val Ile		
	165	170
Lys His Tyr Asn Lys Phe Asn Gln Arg Met Pro Leu Ile Tyr Val Lys		
	180	185
Leu Tyr Thr Tyr Gln Ile Phe Arg Ala Leu Ser Tyr Ile His Arg Cys		
	195	200
Ile Gly Val Cys His Arg Asp Ile Lys Pro Gln Asn Leu Leu Val Asn		
	210	215
Pro His Thr His Gln Val Lys Leu Cys Asp Phe Gly Ser Ala Lys Val		
	225	230
Leu Val Lys Gly Glu Pro Asn Ile Ser Tyr Ile Cys Ser Arg Tyr Tyr		
	245	250
Arg Ala Pro Glu Leu Ile Phe Gly Ala Thr Glu Tyr Thr Thr Ala Ile		
	260	265
Asp Val Trp Ser Val Gly Cys Val Leu Ala Glu Leu Leu Leu Gly Gln		
	275	280
Pro Leu Phe Pro Gly Glu Ser Gly Val Asp Gln Leu Val Glu Ile Ile		
	290	295
Lys Val Leu Gly Thr Pro Thr Arg Glu Glu Ile Lys Cys Met Asn Pro		
	305	310
Asn Tyr Thr Glu Phe Lys Phe Pro Gln Ile Lys Ala His Pro Trp His		
	325	330
Lys Ile Phe His Lys Arg Met Pro Pro Glu Ala Val Asp Leu Val Ser		
	340	345
Arg Leu Leu Gln Tyr Ser Pro Asn Leu Arg Cys Thr Val Leu Asp Ala		
	355	360
Leu Asp Ala Pro Phe Pro Leu Asp Glu Phe Arg Asp Pro Asn Pro Arg		
	370	375
		380

B

Leu Pro Asn Gly Pro Ile Xaa Pro Thr Thr Ile Asn Ser Asn Pro
 385 390 395

<210> 15
 <211> 1673
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (1349)
 <223> n = a, c, g or t

<400> 15
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 gcagcaggat ggcgaggcgc cgtatgcgga ggggaacgac gccatgaccg gtcacatcat 180
 ctccaccacc atcggcgaggca agaacggcga gcccaagcag acgattagct acatggcgga 240
 gcgcgttggt ggcactgggt cgtttggcat cgtctttcag gctaaatgcc tggaaaccgg 300
 ggagatgggt ggcattgaaga aggtactgca ggacagacgg tacaagaacc gtgagctgca 360
 gcttatgcgt tcgatgatcc attccaatgt tgtctccctc aagcactgct tcttctcaac 420
 cacaagtaga gatgagctgt tcctgaacct tgtcatggag tatgtcccgg agacgctata 480
 ccgcgtgctt aagcactaca gtaatgccaa ccagggggat ccgcttatct atgtcaagct 540
 ttacatgtat cagcttttta gagggctagc ttatgttcat actgttccag gagtttgcca 600
 cagggatgtg aaaccacaaa atgttttggt tgatcctcta acccatcaag tcaagatctg 660
 tgactttgga agtgcaaaaag ttctgggtacc tgggtgaacct aacatagcat acatagtctc 720
 tcgctactat cgtgctcctg agctcatatt tgggtgcaact gaataatacaa cttcaataga 780
 catatggtca gctggatgtg ttcttgacga gctacttctt ggtcagcctc tgtttccagg 840
 agagactgcg gttgatcagc tagtggagat tatcaagggt cttggtactc caaccctga 900
 ggaaattcgg tgcattgaacc ccaactatac cgagttcagg ttctctcaga ttaaggctca 960
 tccttggcac aagattttcc acaagagaat gcccgctgaa gctatagatc ttgcctcccg 1020
 ccttctccag tattcaccaa atctacgttg cactgctctt gatgcatgtg cacattcctt 1080
 ctttgatgag ctacgtgagc cgaatgcacg cttgcogaat ggccgcccac tccctcctct 1140
 gttcaacttc aaacctgaac tagcgaacgc ctctccagag ctcatacaaa ggcttggtcc 1200
 ggaacatggt cgacggcaaa atggccccc aaatcgccat gctgggagct aaacggggcg 1260
 cgccccgcat gcccatattt ttgtttgtcc gccatcatcg aagaatcaat ctctccccta 1320
 aatcctgagg agagaccgat caagtgcant gccagtgcca gtgaaagaag tacaactatg 1380
 taaattacct gaccttgga gaatcgttgt tgttggtgcc ggtgccggcc atgtttaagt 1440
 acatggcggc acatgttggt tgagttgtta cttattatta agtaggtaag agcaatgatg 1500
 taggaggtgg agacatatgt taatgctagg tctgtgacct gttttaagta catttttgta 1560
 atgcttggtg gtggtactgt aatgcggcaa tagctgctcc atgttttgtc ccttgctcct 1620
 gatgtaaatg tcgtcgtcct gcagcaaaaa aaaaaaaaaa aaaaaaaaaa aaa 1673

<210> 16
 <211> 402
 <212> PRT
 <213> Triticum aestivum

<400> 16
 Met Glu His Pro Ala Pro Ala Pro Glu Pro Met Leu Leu Asp Glu Gln
 1 5 10 15
 Pro Pro Thr Ala Val Ala Cys Glu Lys Lys Gln Gln Asp Gly Glu Ala
 20 25 30
 Pro Tyr Ala Glu Gly Asn Asp Ala Met Thr Gly His Ile Ile Ser Thr
 35 40 45
 Thr Ile Gly Gly Lys Asn Gly Glu Pro Lys Gln Thr Ile Ser Tyr Met
 50 55 60

B13

Ala	Glu	Arg	Val	Val	Gly	Thr	Gly	Ser	Phe	Gly	Ile	Val	Phe	Gln	Ala	
65					70					75					80	
Lys	Cys	Leu	Glu	Thr	Gly	Glu	Met	Val	Gly	Ile	Lys	Lys	Val	Leu	Gln	
				85					90					95		
Asp	Arg	Arg	Tyr	Lys	Asn	Arg	Glu	Leu	Gln	Leu	Met	Arg	Ser	Met	Ile	
			100					105					110			
His	Ser	Asn	Val	Val	Ser	Leu	Lys	His	Cys	Phe	Phe	Ser	Thr	Thr	Ser	
		115					120					125				
Arg	Asp	Glu	Leu	Phe	Leu	Asn	Leu	Val	Met	Glu	Tyr	Val	Pro	Glu	Thr	
	130					135					140					
Leu	Tyr	Arg	Val	Leu	Lys	His	Tyr	Ser	Asn	Ala	Asn	Gln	Gly	Met	Pro	
145					150					155					160	
Leu	Ile	Tyr	Val	Lys	Leu	Tyr	Met	Tyr	Gln	Leu	Phe	Arg	Gly	Leu	Ala	
				165					170					175		
Tyr	Val	His	Thr	Val	Pro	Gly	Val	Cys	His	Arg	Asp	Val	Lys	Pro	Gln	
			180					185					190			
Asn	Val	Leu	Val	Asp	Pro	Leu	Thr	His	Gln	Val	Lys	Ile	Cys	Asp	Phe	
		195					200					205				
Gly	Ser	Ala	Lys	Val	Leu	Val	Pro	Gly	Glu	Pro	Asn	Ile	Ala	Tyr	Ile	
	210					215					220					
Cys	Ser	Arg	Tyr	Tyr	Arg	Ala	Pro	Glu	Leu	Ile	Phe	Gly	Ala	Thr	Glu	
225					230					235					240	
Tyr	Thr	Thr	Ser	Ile	Asp	Ile	Trp	Ser	Ala	Gly	Cys	Val	Leu	Ala	Glu	
			245					250					255			
Leu	Leu	Leu	Gly	Gln	Pro	Leu	Phe	Pro	Gly	Glu	Thr	Ala	Val	Asp	Gln	
			260					265					270			
Leu	Val	Glu	Ile	Ile	Lys	Val	Leu	Gly	Thr	Pro	Thr	Arg	Glu	Glu	Ile	
		275					280					285				
Arg	Cys	Met	Asn	Pro	Asn	Tyr	Thr	Glu	Phe	Arg	Phe	Pro	Gln	Ile	Lys	
	290					295					300					
Ala	His	Pro	Trp	His	Lys	Ile	Phe	His	Lys	Arg	Met	Pro	Ala	Glu	Ala	
305					310					315					320	
Ile	Asp	Leu	Ala	Ser	Arg	Leu	Leu	Gln	Tyr	Ser	Pro	Asn	Leu	Arg	Cys	
				325					330				335			
Thr	Ala	Leu	Asp	Ala	Cys	Ala	His	Ser	Phe	Phe	Asp	Glu	Leu	Arg	Glu	
			340					345					350			
Pro	Asn	Ala	Arg	Leu	Pro	Asn	Gly	Arg	Pro	Phe	Pro	Pro	Leu	Phe	Asn	
		355					360					365				
Phe	Lys	Pro	Glu	Leu	Ala	Asn	Ala	Ser	Pro	Glu	Leu	Ile	Asn	Arg	Leu	
						375					380					

B

B13 Val Pro Glu His Val Arg Arg Gln Asn Gly Pro Asn Phe Ala His Ala
385 390 395 400

Gly Ser

<210> 17
<211> 639
<212> PRT
<213> Zea mays

<400> 17
Met Gly Asn Thr Cys Val Gly Pro Ser Ile Thr Met Asn Gly Phe Phe
1 5 10 15

Gln Ser Val Ser Thr Ala Leu Trp Lys Thr Pro Gln Glu Gly Asp Ala
20 25 30

Leu Pro Ala Ala Ala Asn Gly Pro Gly Gly Pro Ala Gly Ala Gly Ser
35 40 45

Gln Ser Ala Leu Pro Lys Pro Ala Ser Asp Val His His Val Ala Val
50 55 60

Gln Ser Glu Ala Pro Glu Pro Val Lys Ile Ala Ala Tyr His Ser Glu
65 70 75 80

Pro Ala Pro Ala Val Arg Ser Glu Ala Pro Glu Pro Val Lys Ile Ala
85 90 95

Ala Ser His Ser Glu Pro Ala Pro Met Ala Ala Lys Pro Gly Gly Ala
100 105 110

Ala Ala Asn Ala Ser Pro Ser Pro Ser Pro Arg Pro Arg Pro Gln Val
115 120 125

Lys Arg Val Ser Ser Ala Gly Leu Leu Leu Gly Ser Val Leu Arg Arg
130 135 140

Lys Thr Glu Asn Leu Lys Asp Lys Tyr Ser Leu Gly Arg Arg Leu Gly
145 150 155 160

Gln Gly Gln Phe Gly Thr Thr His Leu Cys Val Glu Arg Ala Thr Gly
165 170 175

Lys Glu Leu Ala Cys Lys Ser Ile Leu Lys Arg Lys Leu Gly Ser Asp
180 185 190

Asp Asp Val Glu Asp Val Arg Arg Glu Ile Gln Ile Met His His Leu
195 200 205

Ala Gly His Pro Ser Val Val Gly Ile Arg Gly Ala Tyr Glu Asp Ala
210 215 220

Val Ala Val His Leu Val Met Glu Leu Cys Gly Gly Gly Glu Leu Phe
225 230 235 240

Asp Arg Ile Val Arg Arg Gly His Tyr Thr Glu Arg Lys Ala Ala Glu
245 250 255

Leu Ala Arg Val Ile Val Gly Val Val Glu Ala Cys His Ser Met Gly

B

260							265					270				
Val	Met	His	Arg	Asp	Leu	Lys	Pro	Glu	Asn	Phe	Leu	Phe	Ala	Asp	His	
		275					280					285				
Ser	Glu	Glu	Ala	Ala	Leu	Lys	Thr	Ile	Asp	Phe	Gly	Leu	Ser	Ile	Phe	
	290					295					300					
Phe	Arg	Pro	Gly	Gln	Ile	Phe	Thr	Asp	Val	Val	Gly	Ser	Pro	Tyr	Tyr	
305					310					315					320	
Val	Ala	Pro	Glu	Val	Leu	Lys	Lys	Arg	Tyr	Gly	Pro	Glu	Ala	Asp	Val	
				325					330					335		
Trp	Ser	Ala	Gly	Val	Ile	Ile	Tyr	Ile	Leu	Leu	Cys	Gly	Val	Pro	Pro	
			340					345					350			
Phe	Trp	Ala	Glu	Asn	Glu	Gln	Gly	Ile	Phe	Glu	Glu	Val	Leu	His	Gly	
		355					360					365				
Arg	Leu	Asp	Phe	Glu	Ser	Glu	Pro	Trp	Pro	Ser	Ile	Ser	Asp	Gly	Ala	
	370					375					380					
Lys	Asp	Leu	Val	Arg	Arg	Met	Leu	Val	Arg	Asp	Pro	Arg	Lys	Arg	Leu	
385					390					395					400	
Thr	Ala	His	Glu	Val	Leu	Arg	His	Pro	Trp	Val	Gln	Val	Gly	Gly	Val	
				405					410					415		
Ala	Pro	Asp	Arg	Pro	Leu	Asp	Ser	Ala	Val	Leu	Ser	Arg	Met	Lys	Gln	
			420					425					430			
Phe	Ser	Ala	Met	Asn	Lys	Leu	Lys	Lys	Met	Ala	Leu	Arg	Val	Ile	Ala	
		435					440					445				
Glu	Asn	Leu	Ser	Glu	Asp	Glu	Ile	Ala	Gly	Leu	Arg	Glu	Met	Phe	Lys	
	450					455					460					
Met	Ile	Asp	Ala	Asp	Asn	Ser	Gly	Gln	Ile	Thr	Phe	Glu	Glu	Leu	Lys	
465					470					475					480	
Val	Gly	Leu	Glu	Lys	Val	Gly	Ala	Asn	Leu	Gln	Glu	Ser	Glu	Ile	Tyr	
				485					490					495		
Ala	Leu	Met	Gln	Ala	Ala	Asp	Val	Asp	Asn	Asn	Gly	Thr	Ile	Asp	Tyr	
			500					505					510			
Gly	Glu	Phe	Ile	Ala	Ala	Thr	Leu	His	Leu	Asn	Lys	Val	Glu	Arg	Glu	
		515					520					525				
Asp	His	Leu	Phe	Ala	Ala	Phe	Gln	Tyr	Phe	Asp	Lys	Asp	Gly	Ser	Gly	
	530					535					540					
Tyr	Ile	Thr	Ala	Asp	Glu	Leu	Gln	Val	Ala	Cys	Glu	Glu	Phe	Gly	Leu	
545					550					555					560	
Gly	Asp	Val	Gln	Leu	Glu	Asp	Leu	Ile	Gly	Glu	Val	Asp	Gln	Asp	Asn	
				565					570					575		
Asp	Gly	Arg	Ile	Asp	Tyr	Asn	Glu	Phe	Val	Ala	Met	Met	Gln	Lys	Pro	
			580					585					590			

Glu Val Lys Ile Leu Lys Ala Leu Ser Gly His Asp Asn Leu Val Arg
225 230 235 240

B¹³

Phe Tyr Asp Ala Cys Glu Asp Ala Leu Asn Val Tyr Ile Val Met Glu
245 250 255

Leu Cys Glu Gly Gly Glu Leu Leu Asp Arg Ile Leu Ala Arg Gly Gly
260 265 270

Arg Tyr Thr Glu Glu Asp Ala Lys Ala Ile Ile Val Gln Ile Leu Ser
275 280 285

Val Val Ala Phe Cys His Leu Gln Gly Val Val His Arg Asp Leu Lys
290 295 300

Pro Glu Asn Phe Leu Phe Thr Thr Arg Asp Glu Ser Ala Pro Met Lys
305 310 315 320

Leu Ile Asp Phe Gly Leu Ser Asp Phe Ile Arg Pro Asp Glu Arg Leu
325 330 335

Asn Asp Ile Val Gly Ser Ala Tyr Tyr Val Ala Pro Glu Val Leu His
340 345 350

Arg Ser Tyr Ser Met Glu Ala Asp Ile Trp Ser Ile Gly Val Ile Thr
355 360 365

Tyr Ile Leu Leu Cys Gly Ser Arg Pro Phe Trp Ala Arg Thr Glu Ser
370 375 380

Gly Ile Phe Arg Ser Val Leu Arg Ala Asp Pro Asn Phe Asp Asp Ser
385 390 395 400

Pro Trp Pro Ser Val Ser Ala Glu Ala Lys Asp Phe Val Lys Arg Phe
405 410 415

Leu Asn Lys Asp Tyr Arg Lys Arg Met Thr Ala Val Gln Ala Leu Thr
420 425 430

His Pro Trp Leu Arg Asp Glu Gln Arg Gln Ile Pro Leu Asp Ile Leu
435 440 445

Ile Phe Arg Leu Val Lys Gln Tyr Leu Arg Ala Thr Pro Leu Lys Arg
450 455 460

Leu Ala Leu Lys Ala Leu Ser Lys Ala Leu Ser Glu Asp Glu Leu Leu
465 470 475 480

Tyr Leu Arg Leu Gln Phe Lys Leu Leu Glu Pro Arg Asp Gly Phe Val
485 490 495

Ser Leu Asp Asn Phe Arg Thr Ala Leu Thr Arg Tyr Ser Thr Asp Ala
500 505 510

Met Arg Glu Ser Arg Val Leu Glu Phe Gln His Ala Leu Glu Pro Leu
515 520 525

Ala Tyr Arg Lys Met Asp Phe Glu Glu Phe Cys Ala Ala Ala Ile Ser
530 535 540

Pro Tyr Gln Leu Glu Ala Leu Glu Arg Trp Glu Glu Ile Ala Gly Thr
545 550 555 560

Ala Phe Gln His Phe Glu Gln Glu Gly Asn Arg Val Ile Ser Val Glu

B13

				565						570						575
Glu	Leu	Ala	Gln	Glu	Leu	Asn	Leu	Ala	Pro	Thr	His	Tyr	Ser	Ile	Val	
			580					585					590			
Gln	Asp	Trp	Ile	Arg	Lys	Ser	Asp	Gly	Lys	Leu	Asn	Phe	Leu	Gly	Phe	
			595				600					605				
Thr	Lys	Phe	Leu	His	Gly	Val	Thr	Ile	Arg	Gly	Ser	Asn	Thr	Arg	Arg	
	610					615					620					
His																
625																
<210>	19															
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<213>	Arabidopsis thaliana															
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Pro	Val	Ser	Gly	Glu	Thr	Asn	Glu	Ala	Pro	Thr	Asn	Ser	Gln	Pro	Pro	
			20					25					30			
Ala	Lys	Ser	Ser	Gly	Phe	Pro	Phe	Tyr	Ser	Pro	Ser	Pro	Val	Pro	Ser	
		35					40					45				
Leu	Phe	Lys	Ser	Ser	Pro	Ser	Val	Ser	Ser	Ser	Val	Ser	Ser	Thr	Pro	
	50					55					60					
Leu	Arg	Ile	Phe	Lys	Arg	Pro	Phe	Pro	Pro	Pro	Ser	Pro	Ala	Lys	His	
	65				70					75					80	
Ile	Arg	Ala	Phe	Leu	Ala	Arg	Arg	Tyr	Gly	Ser	Val	Lys	Pro	Asn	Glu	
				85					90					95		
Val	Ser	Ile	Pro	Glu	Gly	Lys	Glu	Cys	Glu	Ile	Gly	Leu	Asp	Lys	Ser	
			100					105					110			
Phe	Gly	Phe	Ser	Lys	Gln	Phe	Ala	Ser	His	Tyr	Glu	Ile	Asp	Gly	Glu	
		115					120					125				
Val	Gly	Arg	Gly	His	Phe	Gly	Tyr	Thr	Cys	Ser	Ala	Lys	Gly	Lys	Lys	
	130					135					140					
Gly	Ser	Leu	Lys	Gly	Gln	Glu	Val	Ala	Val	Lys	Val	Ile	Pro	Lys	Ser	
	145				150					155					160	
Lys	Met	Thr	Thr	Ala	Ile	Ala	Ile	Glu	Asp	Val	Ser	Arg	Glu	Val	Lys	
				165					170					175		
Met	Leu	Arg	Ala	Leu	Thr	Gly	His	Lys	Asn	Leu	Val	Gln	Phe	Tyr	Asp	
			180					185					190			
Ala	Phe	Glu	Asp	Asp	Glu	Asn	Val	Tyr	Ile	Val	Met	Glu	Leu	Cys	Lys	
		195					200					205				
Gly	Gly	Glu	Leu	Leu	Asp	Lys	Ile	Leu	Gln	Arg	Gly	Gly	Lys	Tyr	Ser	
	210					215					220					

B

B¹³

Glu	Asp	Asp	Ala	Lys	Lys	Val	Met	Val	Gln	Ile	Leu	Ser	Val	Val	Ala	
225					230					235					240	
Tyr	Cys	His	Leu	Gln	Gly	Val	Val	His	Arg	Asp	Leu	Lys	Pro	Glu	Asn	
			245						250					255		
Phe	Leu	Phe	Ser	Thr	Lys	Asp	Glu	Thr	Ser	Pro	Leu	Lys	Ala	Ile	Asp	
			260					265					270			
Phe	Gly	Leu	Ser	Asp	Tyr	Val	Lys	Pro	Asp	Glu	Arg	Leu	Asn	Asp	Ile	
		275					280					285				
Val	Gly	Ser	Ala	Tyr	Tyr	Val	Ala	Pro	Glu	Val	Leu	His	Arg	Thr	Tyr	
	290					295					300					
Gly	Thr	Glu	Ala	Asp	Met	Trp	Ser	Ile	Gly	Val	Ile	Ala	Tyr	Ile	Leu	
305					310					315					320	
Leu	Cys	Gly	Ser	Arg	Pro	Phe	Trp	Ala	Arg	Thr	Glu	Ser	Gly	Ile	Phe	
				325					330					335		
Arg	Ala	Val	Leu	Lys	Ala	Glu	Pro	Asn	Phe	Glu	Glu	Ala	Pro	Trp	Pro	
			340					345					350			
Ser	Leu	Ser	Pro	Glu	Ala	Val	Asp	Phe	Val	Lys	Arg	Leu	Leu	Asn	Lys	
		355					360					365				
Asp	Tyr	Arg	Lys	Arg	Leu	Thr	Ala	Ala	Gln	Ala	Leu	Cys	His	Pro	Trp	
	370					375					380					
Leu	Val	Gly	Ser	His	Glu	Leu	Lys	Ile	Pro	Ser	Asp	Met	Ile	Ile	Tyr	
385					390					395					400	
Lys	Leu	Val	Lys	Val	Tyr	Ile	Met	Ser	Thr	Ser	Leu	Arg	Lys	Ser	Ala	
				405					410					415		
Leu	Ala	Ala	Leu	Ala	Lys	Thr	Leu	Thr	Val	Pro	Gln	Leu	Ala	Tyr	Leu	
			420					425					430			
Arg	Glu	Gln	Phe	Thr	Leu	Leu	Gly	Pro	Ser	Lys	Asn	Gly	Tyr	Ile	Ser	
		435					440					445				
Met	Gln	Asn	Tyr	Lys	Thr	Ala	Ile	Leu	Lys	Ser	Ser	Thr	Asp	Ala	Met	
	450					455					460					
Lys	Asp	Ser	Arg	Val	Phe	Asp	Phe	Val	His	Met	Ile	Ser	Cys	Leu	Gln	
465					470					475					480	
Tyr	Lys	Lys	Leu	Asp	Phe	Glu	Glu	Phe	Cys	Ala	Ser	Ala	Leu	Ser	Val	
				485					490					495		
Tyr	Gln	Leu	Glu	Ala	Met	Glu	Thr	Trp	Glu	Gln	His	Ala	Arg	Arg	Ala	
			500					505					510			
Tyr	Glu	Leu	Phe	Glu	Lys	Asp	Gly	Asn	Arg	Pro	Ile	Met	Ile	Glu	Glu	
		515					520					525				
Leu	Ala	Ser	Glu	Leu	Gly	Leu	Gly	Pro	Ser	Val	Pro	Val	His	Val	Val	
			530			535					540					

B

B13 Leu Gln Asp Trp Ile Arg His Ser Asp Gly Lys Leu Ser Phe Leu Gly
545 550 555 560

Phe Val Arg Leu Leu His Gly Val Ser Ser Arg Thr Leu Gln Lys Ala
565 570 575

<210> 20

<211> 405

<212> PRT

<213> Arabidopsis thaliana

<400> 20

Met Ala Ser Val Gly Ile Ala Pro Asn Pro Gly Ala Arg Asp Ser Thr
1 5 10 15

Gly Val Asp Lys Leu Pro Glu Glu Met Asn Asp Met Lys Ile Arg Asp
20 25 30

Asp Lys Glu Met Glu Ala Thr Val Val Asp Gly Asn Gly Thr Glu Thr
35 40 45

Gly His Ile Ile Val Thr Thr Ile Gly Gly Arg Asn Gly Gln Pro Lys
50 55 60

Gln Thr Ile Ser Tyr Met Ala Glu Arg Val Val Gly His Gly Ser Phe
65 70 75 80

Gly Val Val Phe Gln Ala Lys Cys Leu Glu Thr Gly Glu Thr Val Ala
85 90 95

Ile Lys Lys Val Leu Gln Asp Arg Arg Tyr Lys Asn Arg Glu Leu Gln
100 105 110

Thr Met Arg Leu Leu Asp His Pro Asn Val Val Ser Leu Lys His Cys
115 120 125

Phe Phe Ser Thr Thr Glu Lys Asp Glu Leu Tyr Leu Asn Leu Val Leu
130 135 140

Glu Tyr Val Pro Glu Thr Val His Arg Val Ile Lys His Tyr Asn Lys
145 150 155 160

Leu Asn Gln Arg Met Pro Leu Ile Tyr Val Lys Leu Tyr Thr Tyr Gln
165 170 175

Ile Phe Arg Ala Leu Ser Tyr Ile His Arg Cys Ile Gly Val Cys His
180 185 190

Arg Asp Ile Lys Pro Gln Asn Leu Leu Val Asn Pro His Thr His Gln
195 200 205

Val Lys Leu Cys Asp Phe Gly Ser Ala Lys Val Leu Val Lys Gly Glu
210 215 220

Pro Asn Ile Ser Tyr Ile Cys Ser Arg Tyr Tyr Arg Ala Pro Glu Leu
225 230 235 240

Ile Phe Gly Ala Thr Glu Tyr Thr Thr Ala Ile Asp Val Trp Ser Ala
245 250 255

Gly Cys Val Leu Ala Glu Leu Leu Leu Gly Gln Pro Leu Phe Pro Gly

B13

260 265 270

Glu Ser Gly Val Asp Gln Leu Val His Ile Ile Lys Val Leu Gly Thr
275 280 285

Pro Thr Arg Glu Glu Ile Lys Cys Met Asn Pro Asn Tyr Thr Glu Phe
290 295 300

Lys Phe Pro Gln Ile Lys Ala His Pro Trp His Lys Ile Phe His Lys
305 310 315 320

Arg Met Pro Pro Glu Ala Val Asp Leu Val Ser Arg Leu Leu Gln Tyr
325 330 335

Ser Pro Asn Leu Arg Ser Ala Ala Leu Asp Thr Leu Val His Pro Phe
340 345 350

Phe Asp Glu Leu Arg Asp Pro Asn Ala Arg Leu Pro Asn Gly Arg Phe
355 360 365

Leu Pro Pro Ala Phe His Phe Lys Pro His Glu Leu Lys Gly Val Pro
370 375 380

Leu Glu Met Val Ala Lys Leu Val Pro Glu His Ala Arg Lys Gln Cys
385 390 395 400

Pro Trp Leu Gly Leu
405

<210> 21
<211> 412
<212> PRT
<213> Medicago sativa

<400> 21

Met Met Ala Ser Gly Gly Val Ala Pro Ala Ser Gly Phe Ile Asp Lys
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Asn Ala Ser Ser Val Gly Val Glu Lys Leu Pro Glu Glu Met Asn Asp
20 25 30

Met Lys Ile Arg Asp Asp Lys Glu Met Glu Ala Ala Thr Ile Val Asp
35 40 45

Gly Asn Gly Thr Glu Thr Gly His Ile Ile Val Thr Thr Ile Gly Gly
50 55 60

Lys Asn Gly Gln Pro Lys Gln Thr Ile Ser Tyr Met Ala Glu Arg Val
65 70 75 80

Val Gly His Gly Ser Phe Gly Val Val Phe Gln Ala Lys Cys Leu Glu
85 90 95

Thr Gly Glu Thr Val Ala Ile Lys Lys Val Leu Gln Asp Lys Arg Tyr
100 105 110

Lys Asn Arg Glu Leu Gln Thr Met Arg Leu Leu Asp His Pro Asn Val
115 120 125

Val Ser Leu Lys His Cys Phe Phe Ser Thr Thr Glu Lys Asp Glu Leu
130 135 140

B

Tyr Leu Asn Leu Val Leu Glu Tyr Val Pro Glu Thr Val Ser Arg Val
 145 150 155 160
 Ile Arg His Tyr Asn Lys Met Asn Gln Arg Met Pro Met Ile Tyr Val
 165 170 175
 Lys Leu Tyr Ser Tyr Gln Ile Cys Arg Ala Leu Ala Tyr Ile His Asn
 180 185 190
 Ser Ile Gly Val Cys His Arg Asp Ile Lys Pro Gln Asn Leu Leu Val
 195 200 205
 Asn Pro His Thr His Gln Leu Lys Ile Cys Asp Phe Gly Ser Ala Lys
 210 215 220
 Val Leu Val Lys Gly Glu Pro Asn Ile Ser Tyr Ile Cys Ser Arg Tyr
 225 230 235 240
 Tyr Arg Ala Pro Glu Leu Ile Phe Gly Ala Thr Glu Tyr Thr Thr Ala
 245 250 255
 Ile Asp Ile Trp Ser Ala Gly Cys Val Leu Gly Glu Leu Leu Leu Gly
 260 265 270
 Gln Pro Leu Phe Pro Gly Glu Ser Gly Val Asp Gln Leu Val Glu Ile
 275 280 285
 Ile Lys Val Leu Gly Thr Pro Thr Arg Glu Glu Ile Lys Cys Met Asn
 290 295 300
 Pro Asn Tyr Thr Glu Phe Lys Phe Pro Gln Ile Lys Ala His Pro Trp
 305 310 315 320
 His Lys Ile Phe His Lys Arg Met Pro Pro Glu Ala Val Asp Leu Val
 325 330 335
 Ser Arg Leu Leu Gln Tyr Ser Pro Asn Leu Arg Ser Thr Ala Leu Glu
 340 345 350
 Ala Leu Val His Pro Phe Tyr Asp Asp Val Arg Asp Pro Asn Thr Arg
 355 360 365
 Leu Pro Asn Gly Arg Phe Leu Pro Pro Leu Phe Asn Phe Lys Val Asn
 370 375 380
 Glu Leu Lys Gly Val Pro Ala Glu Met Leu Val Lys Leu Val Pro Pro
 385 390 395 400
 His Ala Arg Lys Gln Cys Ala Leu Phe Gly Ser Ser
 405 410

<210> 22

<211> 411

<212> PRT

<213> Medicago sativa

<400> 22

Met Ala Ser Val Gly Val Ala Pro Thr Ser Gly Phe Arg Glu Val Leu
 1 5 10 15

B13

Gly Asp Gly Glu Ile Gly Val Asp Asp Ile Leu Pro Glu Glu Met Ser
 20 25 30
 Asp Met Lys Ile Arg Asp Asp Arg Glu Met Glu Ala Thr Val Val Asp
 35 40 45
 Gly Asn Gly Thr Glu Thr Gly His Ile Ile Val Thr Thr Ile Gly Gly
 50 55 60
 Arg Asn Gly Gln Pro Lys Gln Thr Ile Ser Tyr Met Ala Glu Arg Val
 65 70 75 80
 Val Gly His Gly Ser Phe Gly Val Val Phe Gln Ala Lys Cys Leu Glu
 85 90 95
 Thr Gly Glu Thr Val Ala Ile Lys Lys Val Leu Gln Asp Lys Arg Tyr
 100 105 110
 Lys Asn Arg Glu Leu Gln Thr Met Arg Leu Leu Asp His Pro Asn Val
 115 120 125
 Val Ser Leu Lys His Cys Phe Phe Ser Thr Thr Glu Lys Asp Glu Leu
 130 135 140
 Tyr Leu Asn Leu Val Leu Glu Tyr Val Pro Glu Thr Val His Arg Val
 145 150 155 160
 Ile Lys His Tyr Ser Lys Leu Asn Gln Arg Met Pro Met Ile Tyr Val
 165 170 175
 Lys Leu Tyr Thr Tyr Gln Ile Phe Arg Ala Leu Ser Tyr Ile His Arg
 180 185 190
 Cys Ile Gly Val Cys His Arg Asp Ile Lys Pro Gln Asn Leu Leu Val
 195 200 205
 Asn Pro His Thr His Gln Val Lys Leu Cys Asp Phe Gly Ser Ala Lys
 210 215 220
 Val Leu Val Lys Gly Glu Pro Asn Ile Ser Tyr Ile Cys Ser Arg Tyr
 225 230 235 240
 Tyr Arg Ala Pro Glu Leu Ile Phe Gly Ala Thr Glu Tyr Thr Thr Ala
 245 250 255
 Ile Asp Val Trp Ser Val Gly Cys Val Leu Ala Glu Leu Leu Leu Gly
 260 265 270
 Gln Pro Leu Phe Pro Gly Glu Arg Gly Val Asp Gln Leu Val Glu Ile
 275 280 285
 Ile Lys Val Leu Gly Thr Pro Thr Arg Glu Glu Ile Lys Cys Met Asn
 290 295 300
 Pro Asn Tyr Thr Glu Phe Lys Phe Pro Gln Ile Lys Ala His Pro Trp
 305 310 315 320
 His Lys Ile Phe His Lys Arg Met Pro Ala Glu Ala Val Asp Leu Val
 325 330 335
 Ser Arg Leu Leu Gln Tyr Ser Pro Asn Leu Arg Cys Gln Ala Leu Asp

B

340

345

350

B13 Cys Leu Thr His Pro Phe Phe Asp Glu Leu Arg Asp Pro Asn Ala Arg
355 360 365

Leu Pro Thr Gly Arg Phe Leu Pro Pro Leu Phe Asn Phe Lys Pro His
370 375 380

Glu Leu Lys Gly Val Pro Val Glu Thr Leu Met Lys Leu Val Pro Glu
385 390 395 400

His Ala Arg Lys Gln Cys Pro Phe Leu Gly Leu
405 410

<210> 23

<211> 407

<212> PRT

<213> Arabidopsis thaliana

<400> 23

Met Ala Ser Leu Pro Leu Gly Pro Gln Pro His Ala Leu Ala Pro Pro
1 5 10 15

Leu Gln Leu His Asp Gly Asp Ala Leu Lys Arg Arg Pro Glu Leu Asp
20 25 30

Ser Asp Lys Glu Met Ser Ala Ala Val Ile Glu Gly Asn Asp Ala Val
35 40 45

Thr Gly His Ile Ile Ser Thr Thr Ile Gly Gly Lys Asn Gly Glu Pro
50 55 60

Lys Gln Thr Ile Ser Tyr Met Ala Glu Arg Val Val Gly Thr Gly Ser
65 70 75 80

Phe Gly Ile Val Phe Gln Ala Lys Cys Leu Glu Thr Gly Glu Ser Val
85 90 95

Ala Ile Lys Lys Val Leu Gln Asp Arg Arg Tyr Lys Asn Arg Glu Leu
100 105 110

Gln Leu Met Arg Pro Met Asp His Pro Asn Val Ile Ser Leu Lys His
115 120 125

Cys Phe Phe Ser Thr Thr Ser Arg Asp Glu Leu Phe Leu Asn Leu Val
130 135 140

Met Glu Tyr Val Pro Glu Thr Leu Tyr Arg Val Leu Arg His Tyr Thr
145 150 155 160

Ser Ser Asn Gln Arg Met Pro Ile Phe Tyr Val Lys Leu Tyr Thr Tyr
165 170 175

Gln Ile Phe Arg Gly Leu Ala Tyr Ile His Thr Val Pro Gly Val Cys
180 185 190

His Arg Asp Val Lys Pro Gln Asn Leu Leu Val Asp Pro Leu Thr His
195 200 205

Gln Val Lys Leu Cys Asp Phe Gly Ser Ala Lys Val Leu Val Lys Gly
210 215 220

Cont
 B13

Glu	Pro	Asn	Ile	Ser	Tyr	Ile	Cys	Ser	Arg	Tyr	Tyr	Arg	Ala	Pro	Glu
225					230					235					240
Leu	Ile	Phe	Gly	Ala	Thr	Glu	Tyr	Thr	Ala	Ser	Ile	Asp	Ile	Trp	Ser
				245					250					255	
Ala	Gly	Cys	Val	Leu	Ala	Glu	Leu	Leu	Leu	Gly	Gln	Pro	Leu	Phe	Pro
			260					265					270		
Gly	Glu	Asn	Ser	Val	Asp	Gln	Leu	Val	Glu	Ile	Ile	Lys	Val	Leu	Gly
		275					280					285			
Thr	Pro	Thr	Arg	Glu	Glu	Ile	Arg	Cys	Met	Asn	Pro	Asn	Tyr	Thr	Asp
	290					295					300				
Phe	Arg	Phe	Pro	Gln	Ile	Lys	Ala	His	Pro	Trp	His	Lys	Val	Phe	His
305					310					315					320
Lys	Arg	Met	Pro	Pro	Glu	Ala	Ile	Asp	Leu	Ala	Ser	Arg	Leu	Leu	Gln
				325					330					335	
Tyr	Ser	Pro	Ser	Leu	Arg	Cys	Thr	Ala	Leu	Glu	Ala	Cys	Ala	His	Pro
			340					345					350		
Phe	Phe	Asn	Glu	Leu	Arg	Glu	Pro	Asn	Ala	Arg	Leu	Pro	Asn	Gly	Arg
		355					360					365			
Pro	Leu	Pro	Pro	Leu	Phe	Asn	Phe	Lys	Gln	Glu	Leu	Gly	Gly	Ala	Ser
	370					375					380				
Met	Glu	Leu	Ile	Asn	Arg	Leu	Ile	Pro	Glu	His	Val	Arg	Arg	Gln	Met
385					390					395					400
Ser	Thr	Gly	Leu	Gln	Asn	Ser									
				405											
